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REMARKS

Claims 45-76 are now pending in this application. Claims 1-5, 8-17, 20-30 and 33-44 have been cancelled without prejudice. New claims 45-76 have been added in order to more particularly claim the present invention and embodiments thereof. Applicants respectfully submit no new matter has been added. Reconsideration is respectfully requested in view of the following remarks.

Claims 1, 3-5, 9, 12, 14-17, 21, 24, 25, 27-30 and 33-36 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,675,385 to Wang (Wang) in view of U.S. Patent No. 6,097,441 to Allport (Allport). Claims 8, 10, 11, 20, 22, 23 and 37 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Wang and Allport as applied to claims 9, 21 and 36 above, and further in view of U.S. Patent Application No. 2002/0069416 to Stiles (Stiles). Claims 2, 13 and 26 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Wang, Shintani and Fang as applied to claims 1, 12 and 24 above, and further in view of Fang (6,816,201). Claims 38-44 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Wang, in view of Fang. As these claims have been cancelled the rejections are now moot.

The claims as now presented, specifically independent claims 45, 65 and 69, are directed at a network and method of reconfiguring an existing base of IRDs to deliver additional information such as electronic program guides or Web data to a user. The IRD's low-speed serial data port, ordinarily used to debug the IRD, is reconfigured to provide a low-speed data link to a viewing device (other than the video display device e.g. a TV, for displaying the broadcast television signals). The additional information is inserted in the satellite broadcast that is downloaded to the IRD. Extraction means installed in the IRD extracts the additional information and directs it to the IRD's serial data port. A software application in the viewing device retrieves data from its serial data port and stores it in memory for display.

The existing base of designed and/or installed IRDs world-wide is in the millions. The cost to

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change the design and more particularly to replace the installed base of IRDs would be very high. The current invention addresses the demand to provide additional information to consumers subject to the constraints of the existing IRD design. This additional information may be program guide data that the user wishes to view separately or Web data that the user cannot otherwise access. The low-speed serial data port is not an ideal solution in that its limited bandwidth does not support streaming of TV signals for real-time display on the viewing device or real-time interaction with Web data. If one were to redesign and reinstall the IRDs the obvious approach would be to provide an additional high-speed port. The current invention provides customers with program guide information and Web data that they would not otherwise be able to access.

Wang relates to electronic program guides for digital television systems where the program guides are transmitted in hypertext markup language (HTML) in an MPEG digital television system. The Wang program guides include a rotating data carousel of HTML pages formatted to be transported in the data packets of an MPEG-2 data stream. Wang sends both the television signals and program guides or web pages over the high speed link to the television. Most web pages are retrieved in real time "on the fly" from the work memory in response to commands from the users. (Col 4, lines 53-54). As such the link between the set-top box and the television must be high-speed.

Allport teaches a base station 75 that receives signals 90 such as broadcast, cable or satellite TV, VCR, DVD etc. Base station 75 includes high-speed ports 105 and 110 for sending video signals and other information to the TV and remote control unit, respectively, and an IR port for receiving commands from the remote control unit. Port 105 is typically hardwired to the TV. Port 110 is preferably RF. "The main reason RF is preferred is that an important aspect of the present invention is the ability to view video on the remote control's display 15." (col. 10, lines 21-23) Allport recites multiple applications where video is transmitted over the RF link to the remote control unit for real-time display including TV signals, video games, etc. The remote control unit does have a low-speed IR

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port that is used to send commands to the base station and TV. Typical commands 120 to the TV include adjusting volume, channel, input, etc. (col. 10, l. 36-42) Typical commands 115 to the base station may be to change channels, a request to swap displayed programs with the TV, a request to access new data from the internet. (Col. 10, l. 49-54).

Allport's "system for dual-display interaction with integrated television and internet content" is thus very different from the claimed invention. Consider two cases for handling satellite TV signals with embedded data. In a first case, an existing IRD receives the satellite broadcast, decrypts and decodes the signal, checks permission, account information etc. and then sends the TV signal and embedded data via its high speed port to Allport's base station. In this case, Allport very clearly does not configure the IRD's low-speed serial data port, ordinarily used to debug the IRD, to provide a data link to the remote control unit for receiving the embedded data. In a second case, for purposes of illustration, assume that the IRD functionality is integrated into Allport's base station. In response to commands received from the remote control unit certain information is directed over high-speed port 105 to the TV and other information is directed over high-speed port 110 to the remote control unit. As the title of Allport's patent suggests the base station and remote control unit provide "dual-display interaction". The information sent may be the same TV signal, different TV signals, a TV signal and Web content and they can be switched back-and-forth. In this case, the base station is not an existing IRD and second the RF port 110 is not a low-speed serial data port ordinarily used to debug the IRD. The base station does have a low speed port but it is only used to receive commands from the remote control unit. In either case Allport's base station and remote control unit would constitute "additional communications hardware" the user of an existing IRD would be required to possess.

Assuming one was to modify the Wang set-top box to include a second port to send the program guide or Web data to a separate viewing device, the teachings of both Wang and Allport strongly suggest that the second port would be a high-speed port. Wang stores web pages in memory

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on the set-top box and sends them in response to user requests. Allport specifically teaches that an important aspect of his invention is the ability to view video on the remote control display. Both uses require a high-speed port and data link. Thus it would not have been obvious to modify want to achieve the subject matter of claims 45, 65 and 69. Furthermore, the particularly novelty of the current invention is to use the existing IRD hardware in a manner that provides the additional functionality of extracting and routing the "additional information" to a separate viewing device. This is not taught nor suggested in the cited art. A notice of allowance is respectfully requested.

Independent claim 65 also recites that the extract means "push" the additional information and the viewing devices includes a software application that only retrieves data from its serial data port. This one-way broadcast configuration is not contemplated by either Wang or Allport in which user commands are sent to the set-top box or base station to cause information to be sent to the user. In this embodiment, the viewing device passively receives whatever additional information is pushed over the low-speed serial data port. Similar and related features are also recited in claims 46, 49-50, 55, 58, 66, 72, 75 and 74.

Claims 51 and 52 recite that the IRD must be tuned to a particular channel for at least a predetermined amount of time to push either Web data or a multi-channel program guide through the serial data port. This information is stored in the viewing device for time-shifted viewing. Because the serial data port is band limited it cannot support real-time viewing of streaming information of this type. Similar features are also recited in claims 63 and 74. The band limited challenge provided by the serial data port is further emphasized in claims 66 and 67, in which the viewing device displays icons informing the user when additional information is being transmitted and than when the information has been received and thus can be displayed. As covered in claims 59-60, although user does not have access to an ISP the Web data includes a Web page and a plurality of hyperlinks to give the user the impression of being connected to an interactive ISP even though in fact there is no backchannel to an

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ISP and the Web data was download over a low-speed data link.

Claims 61, 67 and 71 specify that the additional information is coupled to particular discrete broadcast channels "based upon" the subject matter of the additional information being similar to the subject matter of the broadcast television signal in that particular discrete broadcast channel.

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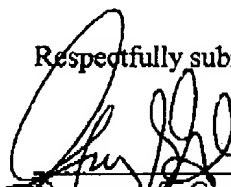
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CONCLUSION

Based upon the foregoing amendment and remarks, Applicants respectfully submit that the pending claims are in condition for allowance. Prompt allowance of all pending claims is therefore requested.

Respectfully submitted,



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